

REMARKS

Claims 1 and 3-20 are presented for consideration, with Claims 1, 11 and 17 being independent.

Independent Claims 1 and 11 have been amended to further distinguish Applicant's invention from the cited art. In addition, editorial changes have been made to selected claims. Claims 17-20 have been added to provide an additional scope of protection.

Claims 1-16 stand rejected under 35 U.S.C. §102(e) as allegedly being anticipated by Wakui '672. This rejection is respectfully traversed.

Claim 1 of Applicant's invention relates to an apparatus for controlling motion of an object, and includes a first actuator for moving an object, an elastic-motion measuring unit for measuring elastic motion of the object, and a rigid-motion measuring unit, distinct from the elastic-motion measuring unit, for measuring rigid motion of the object. In addition, a control unit controls the first actuator based on elastic motion measured by the elastic-motion measuring unit and rigid motion measured by the rigid-motion measuring unit.

Claim 11 relates to an apparatus for controlling motion of an object, and includes a first actuator for moving an object, and a second actuator for suppressing elastic motion of the object. A control unit predicts elastic motion of the object caused by the first actuator and controls at least one of the first and second actuators based on a prediction of elastic motion of the object caused by the first actuator.

In accordance with Applicant's claimed invention, a high performance apparatus for controlling the motion of an object can be provided.

The patent to Wakui relates to an active vibration isolation device that drives an intermediate plate 5, to which a vibration damping subject 4 is coupled by laminated rubber 3

and electromagnetic motors 6a, 6b. Absolute velocity sensors 9a, 9b and 9c are provided for detecting vibrations. In addition, a feedback mechanism is provided for controlling an actuator 1 based on the detected vibrations.

In contrast to Claim 1 of Applicant's invention, however, Wakui does not teach or suggest, among other features, an elastic-motion measuring unit and a distinct rigid-motion measuring unit, and a control unit for controlling an actuator based on motion measured by both of these units. Similarly, Wakui fails to teach or suggest, inter alia, a control unit for predicting elastic motion of an object and controlling at least one of a first actuator for moving the object and a second actuator for suppressing elastic motion of the object, based on the prediction, as set forth in Claim 11. Accordingly, reconsideration and withdrawal of the rejection of the claims under 35 U.S.C. §102(e) is respectfully requested.

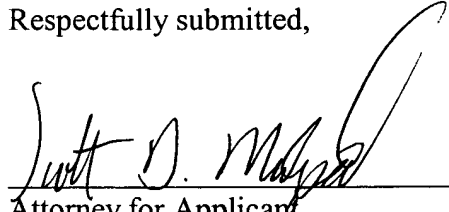
Therefore, it is submitted that Applicant's invention as set forth in independent Claims 1 and 11 is patentable over the cited art. In addition, dependent Claims 3-10 and 12-16 set forth additional features of Applicant's invention. Independent consideration of the dependent claims is respectfully requested.

New Claims 17-20 are also submitted to be patentable over the cited art. In Claim 17, the apparatus includes a first actuator for moving an object, and a rigid-motion measuring unit for measuring rigid motion of the object. Additionally, a control unit predicts elastic motion of the object and controls the first actuator based on the measured rigid motion and the predicted elastic motion.

In view of the foregoing, reconsideration and allowance of this application is deemed to be in order and such action is respectfully requested.

Applicant's undersigned attorney may be reached in our Washington, D.C. office by telephone at (202) 530-1010. All correspondence should continue to be directed to our below-listed address.

Respectfully submitted,



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